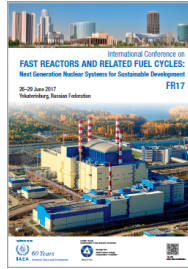


# International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17)



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## Methodical uncertainty of criticality precise calculations for fast lead reactor

Wednesday 28 June 2017 17:50 (1h 10m)

Criticality calculations for BFS-1 test facility with lead were performed using Monte-Carlo code MCU-BR to verify some evaluated neutron data files for fast spectra. These data files are RUSFOND, ENDF/B-VII.1, JEFF-3.2, JENDL-4.0, CENDL-3.1 and some combined data. The continuous energy treatment (ACE format) was used. Critical assemblies include the pellets consisted from fissionable materials, lead, stainless steel and other. The average  $K_{eff}$  evaluation for each critical assembly was obtained. Standard deviation for  $K_{eff}$  at various data files is in interval 0,1% - 0,4% with probability of 0,55 - 0,82, for average  $K_{eff}$  evaluation standard deviation is 0,14% with probability of 0,73.

### Country/Int. Organization

JOINT-STOCK COMPANY «N.A. DOLLEZHAL RESEARCH AND DEVELOPMENT INSTITUTE OF POWER ENGINEERING»

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